UTAH DEPARTMENT OF TRANSPORTATION
TRAFFIC OPERATIONS CENTER
MONTHLY REPORT MARCH 2003

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Field Devices Summary

Freeway Closed Circuit Television (CCTV)	163
Surface Street CCTV	32
Dial-up CCTV	35
Total CCTV	**230**
Freeway VMS	42
Surface Street VMS	17
Portable VMS	2
Total VMS	**61**
HAR (5 deployed, 5 portable units)	10
TMS	231
RWIS	52
Connected Traffic Signals	613
Connected Ramp Meters	23

Operations Summary

VMS Messages Displayed	155
Signal Timing Calls	41
Signal Maintenance Calls	250
New Work Orders	354
Incident Responses	429
Website Visitor Sessions	47,373
511 Calls	19,017
Email Alerts Sent	542
CommuterLink Questions	14

TOC Employee of the Month

Mike Bishop
(ITS Signal Construction and Maintenance)

A snapshot from the camera located at the new Grassy Knoll RWIS station along I-80 at RP 62 (west of Tooele).

KUDOS!

This is Great! I am so happy to see this kind of effort going into traffic control. I have set up a profile and love the idea I will know about problems before I leave home or work…

An excited CommuterLink customer

TOC Mission

1. To Support UDOT and the Department of Public Safety in Improving Highway Safety.
2. To Help Provide Reliable and Efficient Travel.
3. To Provide Useful and Timely Real-time Traffic Information.
4. To Work Together with Other Government Agencies to Serve the Public.
5. To Provide Excellent Customer Service.

ACTIVITY HIGHLIGHTS

TOC Activities

This Month

1. There are a few new faces that can be seen around the TOC. Roy Gregerson will be working in the UDOT Signal Timing and Coordination Group. Roy came to the TOC from the State Radio Shop. Kyle Hortin, a new Software Engineer for TransCore, will be managing the maintenance and improvements of the ATMS software. Becky Bradshaw, from the UDOT Aeronautical Division, will also be around the TOC for a few days a week. She is a Human Resources Representative, and will also be taking care of the TOC's accounting needs.

2. The TOC's recent purchase of a sub-meter handheld GPS unit prompted a training meeting on how to use this new device. Carma Ingram, from Monson Engineering, gave the training on the new unit. Clint Hutchings helped organize the training and prepared a new data dictionary that will be used in the process. The new GPS unit will initially be used to inventory the UDOT ATMS devices, as well as all overhead lighting. The coordinates that are obtained from the GPS will then be located on a GIS map. This will enable data concerning each device to be readily available to any user. This data can then be used to see the last time the device was serviced, and can be used to implement a preventative maintenance program. There were over 10 people from Region II and the TOC that were in attendance.

The GeoXT GPS CE handheld.


The GIS based web site for the ATMS system currently being developed by Clint Hutchings. (http://168.178.120.60/website/ATMS_devices)

3. DPS held a 40 hour Post Training Certification Course at the TOC. This training/certification course is required for all dispatchers who work for any state agency. There were nearly 30 dispatchers from various parts of the state including: Salt Lake International Airport, Salt Lake County, Salt Lake City, Box Elder County, Vernal, as well as our own DPS dispatchers. This weeklong training helps the dispatchers acquire the skills necessary to protect and serve the public in the best manner. Once they have taken this course, they have a background check, and can become State Dispatchers. The dispatchers in attendance were impressed by the training, and even received a surprise visit from the SWAT Team.

4. IRISme and Metrocall wireless companies gave a presentation on an innovative alpha-numeric pager. These new pagers allow users to send text messages to one another with their personal pager, as well as manage their own pager account. The pager has a small keyboard, which enables users to instantly send messages to one another without having to access the J-page system. The ability for one to be able to manage their own account will provide the flexibility for subscribes to not have to carry multiple wireless devices at one time, and to not receive messages that do not concern them. The new pagers are currently on a trial program to determine whether or not they will be implemented.

5. Tammy Pugmire and Troy Hyer received UDOT incentive awards. Tammy received her award for discovering ways to save the department money, her continued work on an elevator project, and taking on new and challenging responsibilities. Troy received an award for the great Customer Service Training discussed in February's monthly report.

ATMS Improvement and Expansion Activities

1. The new Grassy Knoll RWIS station has been deployed on I-80 near milepost 62.
2. The following list shows many of the projects underway, shown by Region:

Region 1:

- Cost estimates are complete for the installation of fiber along I-15 between Farmington and Hill Field Road. This connection will complete the fiber path between the TOC and Region 1 headquarters.

Region 2:

- The UDOT ITS division and the State Traffic Management Technical Subcommittee have identified several ATMS deployment projects, including the connection of several additional traffic signals, CCTV along Bangerter Highway, and a VMS on I-80 west of Lakepoint (about Reference Post 100).
- The ITS division is busy adding several ATMS elements into the Request for Proposals for the planned expansion of SR-201.
- Additionally, new conduit and fiber optic cable was recently installed from the existing point-of-the-mountain camera on the north side to the new point-of-the-mountain camera on the south side (about 2.5 miles). This will enable the connection to the new camera, future devices, and makes a step toward connecting UDOT Region 3 Headquarters.
- A new VMS has been raised on Northbound I-215 West and 1000 North. The sign is in the process of final hookup, then will undergo testing before it is available for use by the TOC operators.

The Installation of the VMS on NB I-215 West and 1000 North.

Region 3:

- The construction of 13 CCTV and 6 TMS along I-15 through Utah County and on several surface streets in Orem and Provo is now well underway. These devices will be operational this summer.
- The ITS division is also busy finalizing the design for the incorporation of ATMS elements into a resurfacing project from the Utah County line to just south of the Alpine (SR-92) interchange. The design includes CCTV, TMS, one southbound VMS, an RWIS, and 2.5 miles of Fiber Optic Cable and conduit.
- The first traffic signal to be connected through the new IP architecture has been connected to the ICONS system from Spanish Fork.

Region 4:

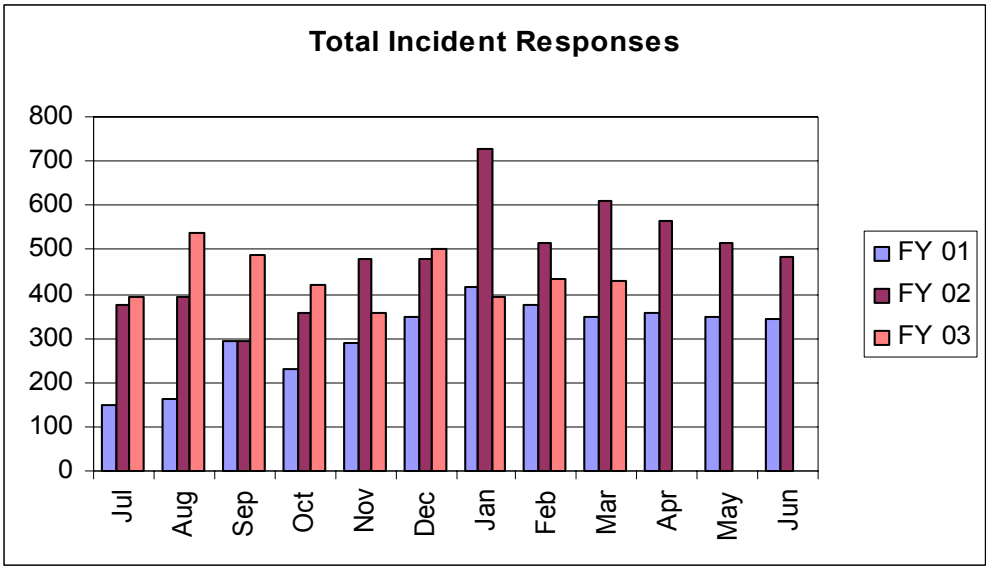
- A new RWIS is being incorporated into a design project near Monticello.
- The next immediate goal for the area is to provide an ICONS server in the St. George area, to help the engineers of St. George City and UDOT Region 4 manage and control the traffic signals throughout the St. George Area.

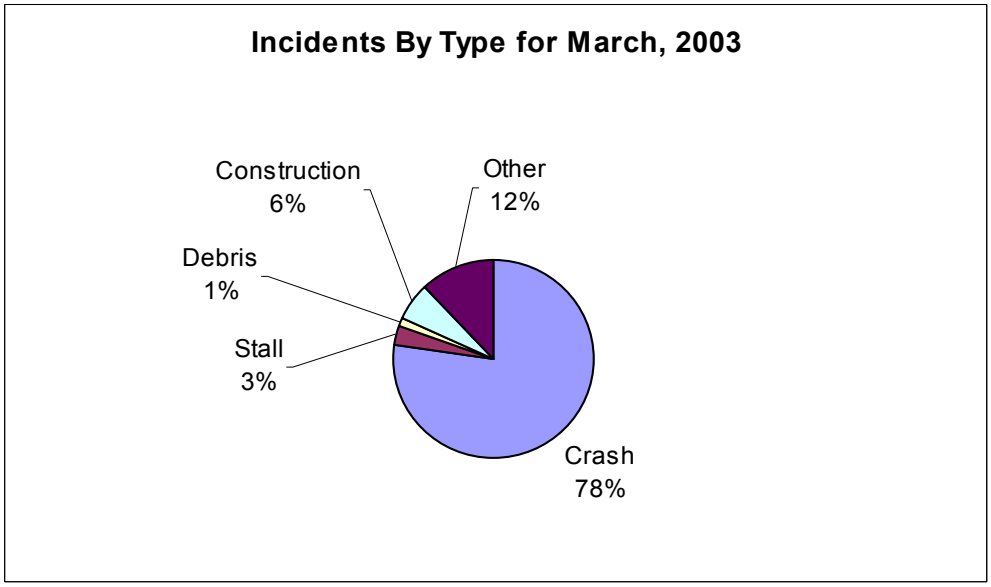
Acronyms

ATMS	Advanced Traffic Management System	NTCIP	National Transportation Communications for ITS Protocol
CCTV	Closed Circuit Television	TMS	Traffic Monitoring Station (count station)
DPS	Department of Public Safety	TOC	Traffic Operations Center
HAR	Highway Advisory Radio	TTI	Travel Time Index
RWIS	Road-Weather Information System	VMS	Variable Message Sign

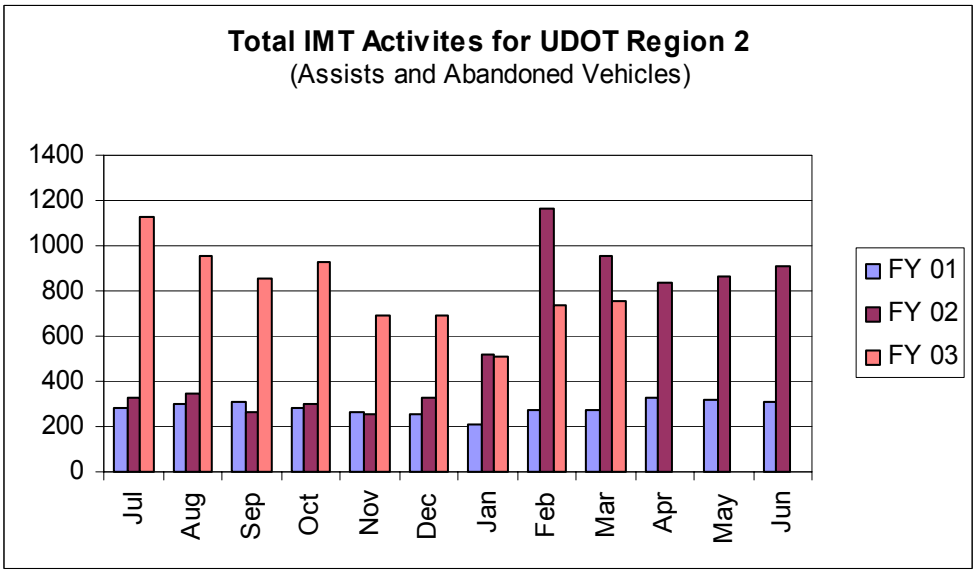
Safety

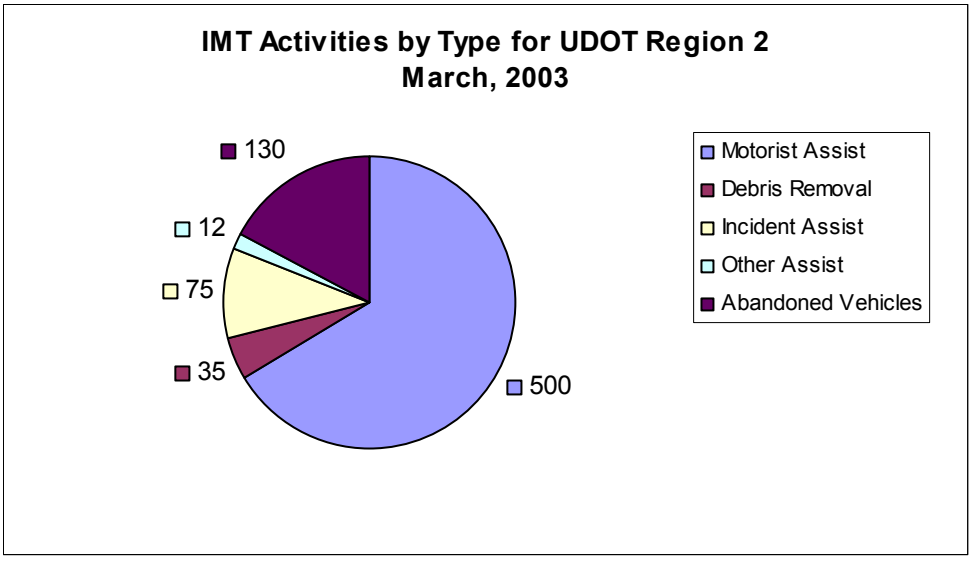
An incident response is an incident recorded in the ATMS system. These can be of several types, including crash, construction, debris, stall, congestion, or other. Each time an incident is created information is sent to the 511 system, the website, and email alerts are generated.





Region 2 Incident Management Team (IMT) Activities





Freeway Flow

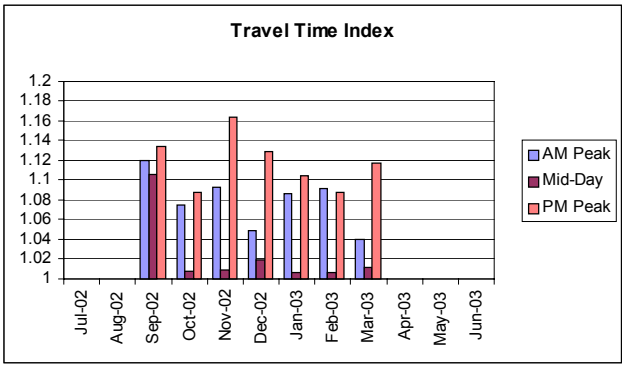
Freeway flow measures are taken from the Traffic Monitoring Stations (TMS) located throughout the Salt Lake Valley. As more TMS sites are installed throughout the state, they will be included in these performance measures.

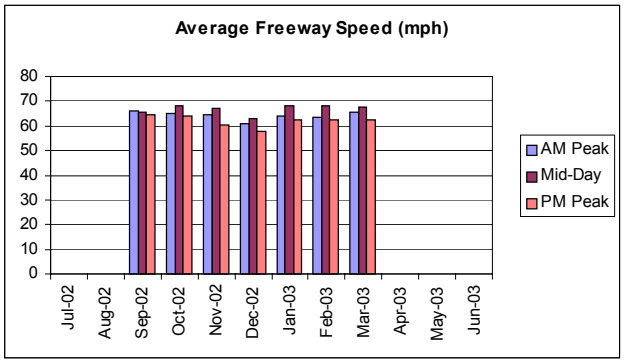
Travel Time Index: This measure of mobility is based on freeway speeds and is weighted by segment lengths and by the traffic volume. A value of one (1) represents free-flow speeds. A value of 1.12 indicates that the average vehicle trip takes 12% longer than if that were the only vehicle on the freeway.

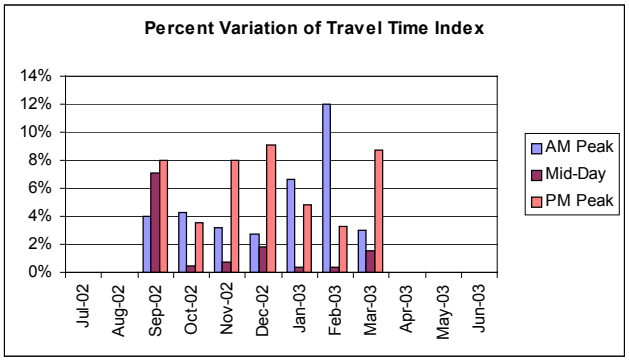
Percent Variation of Travel Time Index: The percent variation in the Travel Time Index is a measure of how much the Travel Time index changes from day-to-day.

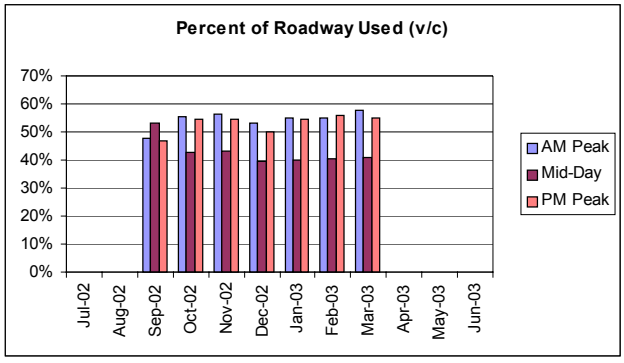
Average Freeway Speed: The Freeway Speed is weighted by volume.

Percent of Roadway Used: The percent of roadway used is the ratio of the volume on the segment to its capacity. This is otherwise known as the volume to capacity ratio, or (v/c).









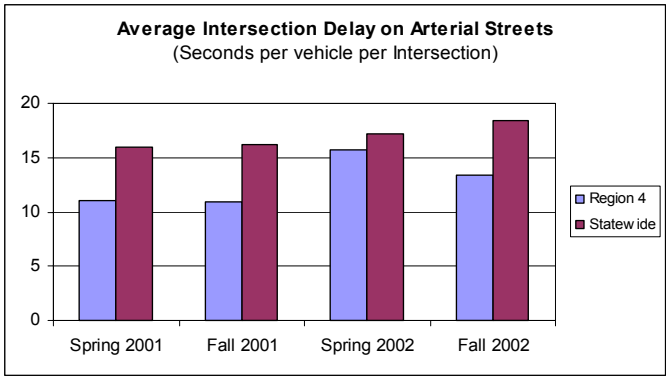
The 6 links with the highest average Travel Time Index for the month are:

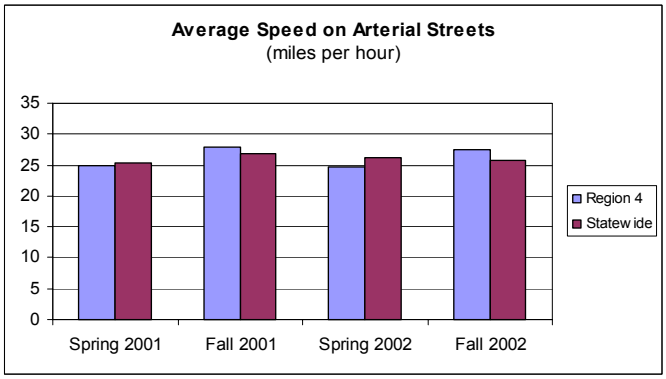
Segment	Period	AvgOfTTI
I-15 NB from 600 N to I-215 W	PM Peak	1.36
I-215 S WB from Knudsen's Corner to I-15	AM Peak	1.25
I-15 NB from 600 S to 600 N	PM Peak	1.23
I-215 S WB from Knudsen's Corner to I-15	PM Peak	1.23
SR-201 WB from I-15 to I-215 W	PM Peak	1.19
SR-201 WB from I-215 W to 7000 W	AM Peak	1.17

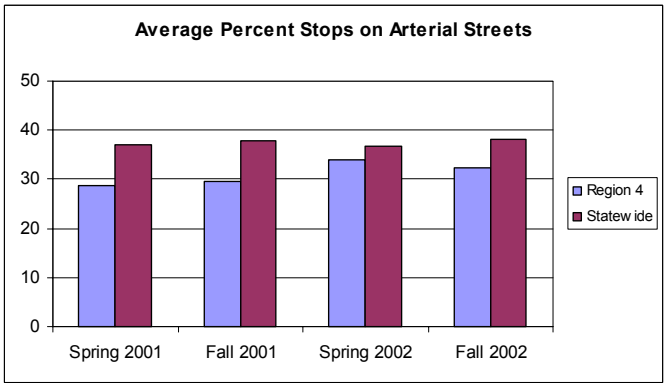
Surface Street Flow

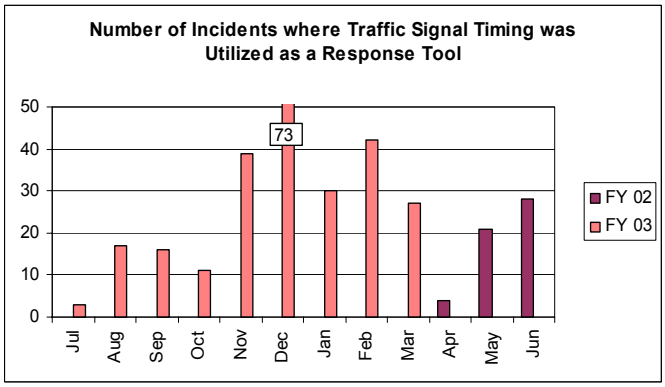
The surface street statistics are generated through a series of Travel Time measurements. Much can be learned through several runs along a corridor, including the average travel time, the average percent of intersections at which a vehicle must stop, the average time stopped at an intersection, and the average speed. The Statewide Timing group gathers these measurements from Regions 1-4 twice each year. The chart in the lower right corner shows the number of incidents where traffic signal timing was modified in order to help traffic flow around closed lanes, or to help flush out excessive congestion.

Since the data is gathered semi-annually, this monthly report will provide charts for one region each month compared to the statewide average. The charts below represent Region 4 compared to the Statewide Average.

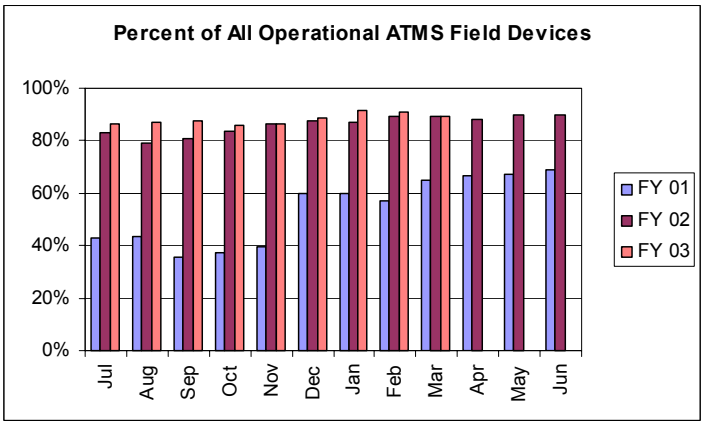


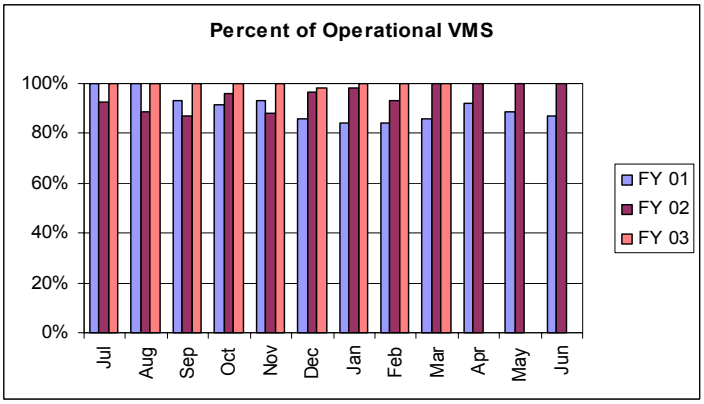


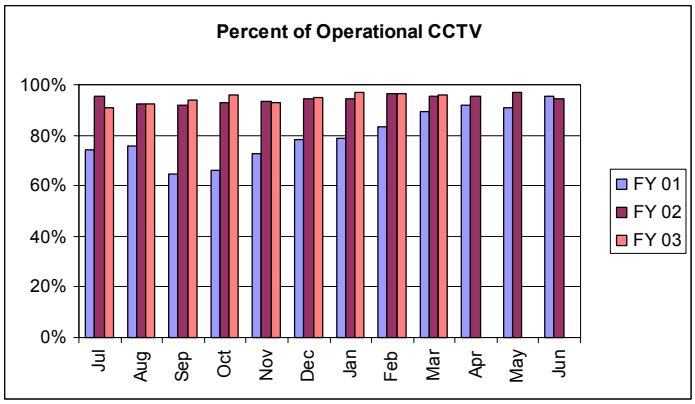


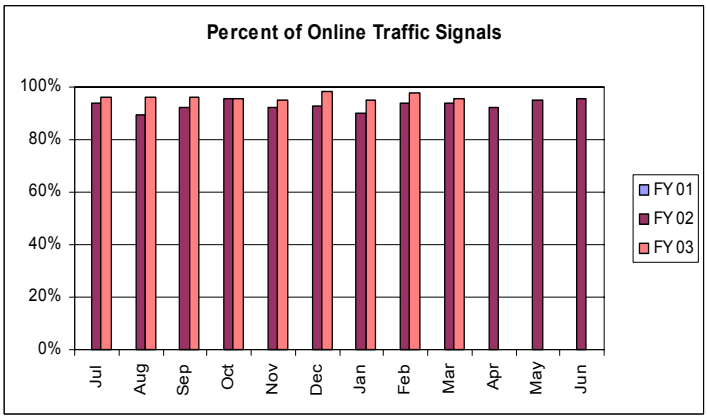


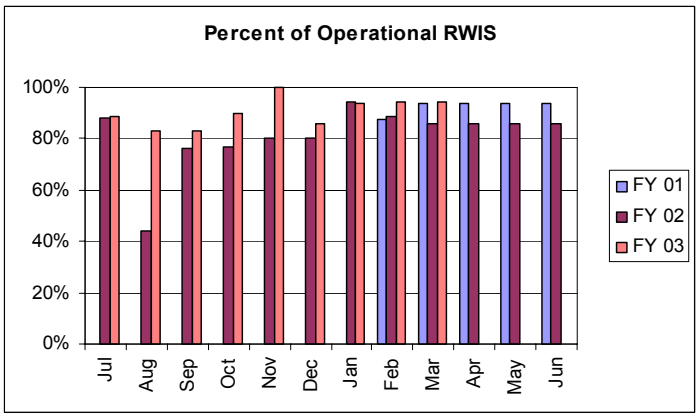
Maintenance

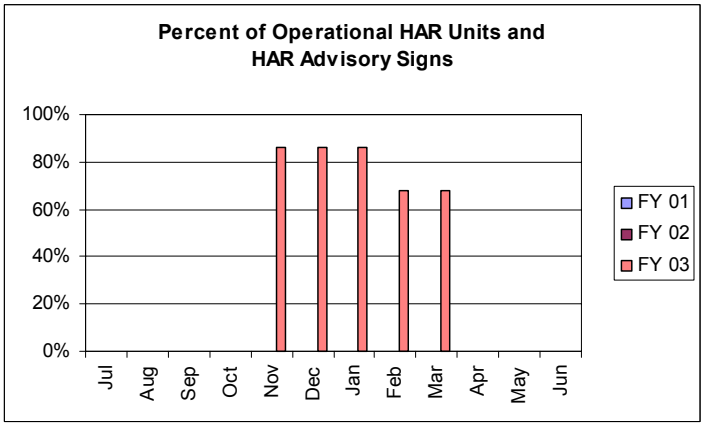


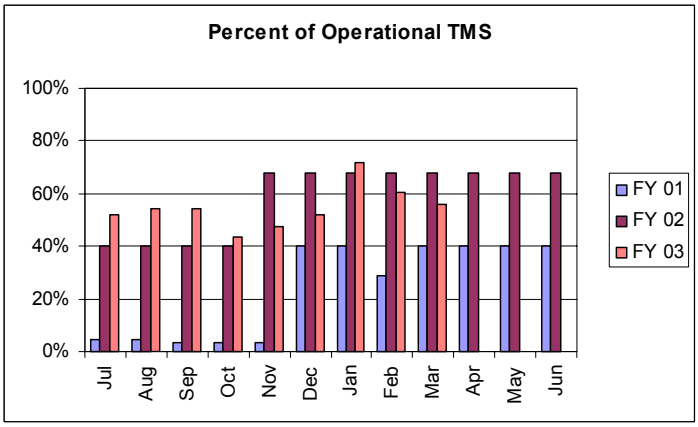




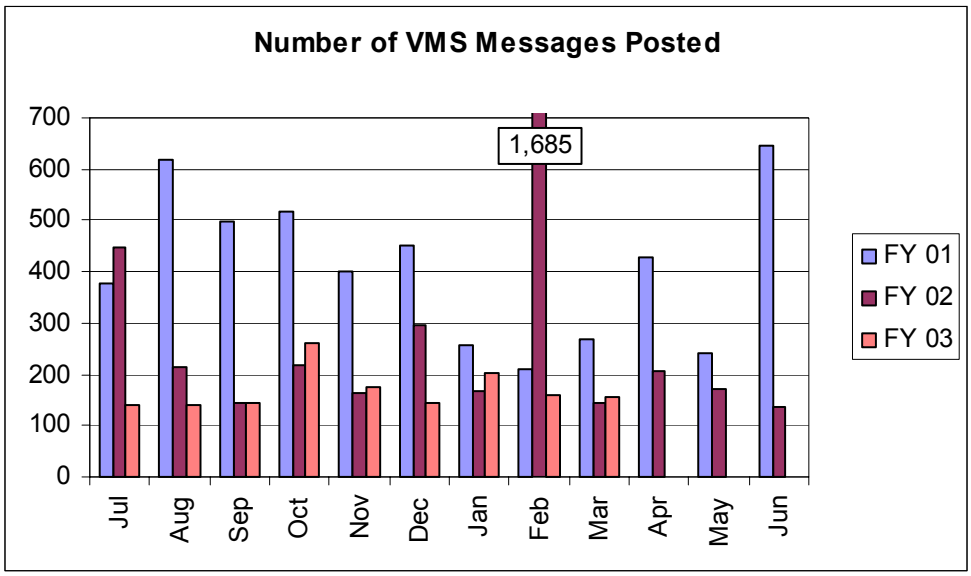


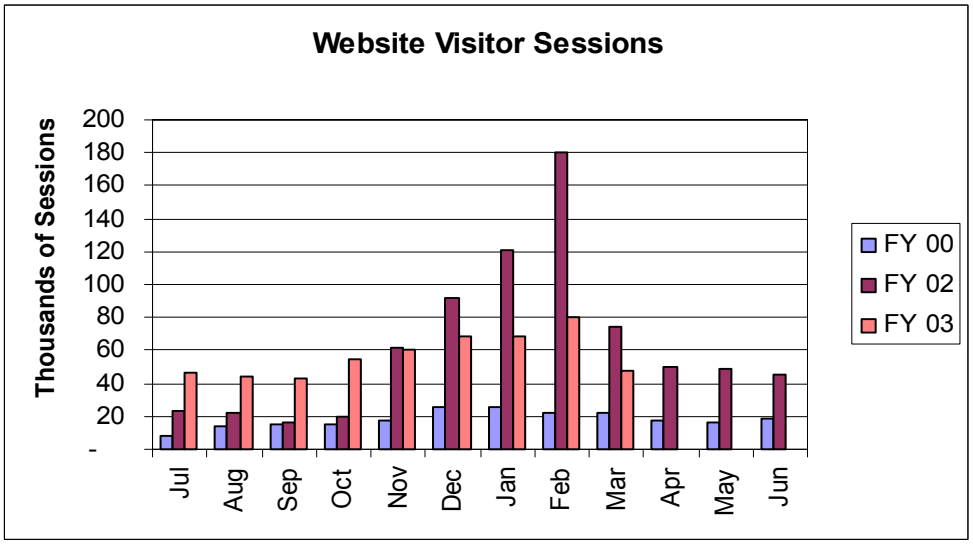


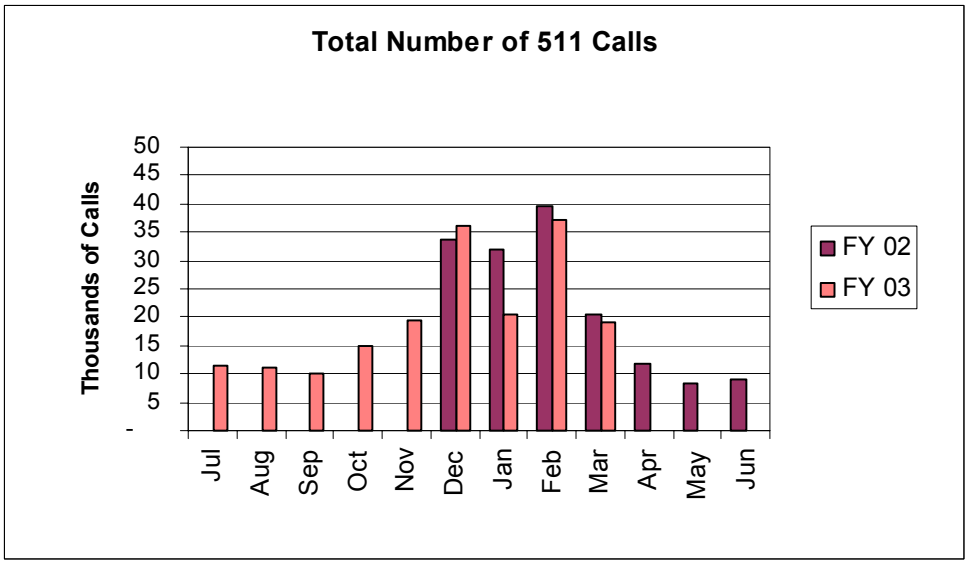




Traveler Information







Customer Service